

ST14

Welded Beam-to-Column Connection

ST14 is a software application for the calculation of welded rigid steel frame.

System

You can verify typical variants of T-corners and knee corners of double T-profile sections:

- T-corner without corner reinforcement
- T-corner with corner reinforcement (haunch), on one or both sides
- K-corner with /without corner reinforcement
- K-corner with welded-on butt strap with /without corner reinforcement
- K-corner with long haunch and field joint with screw fixing.

In all variants, you can increase the bearing capacity of the shear field by applying cross strips or a web reinforcement on one side. In addition, you can fit web ribs inside the column.

All variants could be executed with corner bracing (haunch), an additional web rib in the ledger or an inclined ledger.

Loading (actions)

You have to enter the design values of the internal forces N , M_y and V_z . The internal forces must result for the biggest part from dead loads.

Alternating moments can be included.

You can enter several combinations of actions in the form of a table.

Calculation

The application performs the required verifications concerning the structural safety and the welded connections in accordance with:

- DIN 18800
- DIN EN 1993
- ÖNORM EN 1993

Calculation of the field joint – EN 1993: *component method* for optionally pre-tensioned screws fitted in two vertical rows.

Output

The user can document the results in a well-structured abbreviated or extensive output via a customizable output profile.

Optionally, he/she can generate a graphic representation of the system and include additional text notes in the output.

